

Louisiana Gobbling Activity Survey - 2004

INTRODUCTION

Significant changes were made in hunting season structure beginning with the 1999 turkey season. The turkey season was shortened in Area A (central and south Louisiana) by 7 days and began 1 week later. In Area B the season length was unchanged but the season opened 1 week earlier. These changes were made in response to concern over high harvest rates, deteriorating habitat, and declines in some regional population indices. The goals of these changes were to reduce gobbler harvest and develop more uniform opening dates.

Since 2000, Louisiana has had a uniform opening date, with all turkey hunting areas opening the fourth Saturday in March. The opening day remains a controversial subject, with some hunters favoring an earlier opening, and others favoring a later opening. A common complaint regarding the opening day structure involves the perceived lack of gobbling activity.

In anticipation of hunter concerns about reduced gobbling activity with the later season opening in Area A, we initiated this gobbling activity survey prior to the 1999 turkey season. The goals of this survey are to monitor gobbling activity and identify active periods and trends. Additionally, its usefulness as an abundance index will be evaluated.

METHODS

Survey routes were set up in areas with moderate to high turkey populations. Each survey route consisted of at least 4 stops. More stops were used provided the survey could be completed in 1 hour. At each stop the observer listened for 8 minutes and recorded the number of gobbles heard and the number of individual gobblers. Stops were located so that the same turkeys could not be heard from more than 1 stop. Stops were run in the same order each day and the survey route began at 30 minutes before sunrise. Observers were permitted to use a crow call to stimulate gobbling; however, once a gobble was heard no further calling was permitted. Routes were run at least 5 days per week from 8-26 March. Weather conditions were recorded each day.

Routes north of an east – west line through Alexandria were classified as north Louisiana routes. Routes south of that line were classified as south Louisiana routes.

Data were analyzed using SAS Proc Reg to determine if indices of gobbling activity, (gobbles per stop and gobbles per route) were dependent on day. An alpha level of $P \leq 0.1$ was used to denote significant differences. Summary statistics were developed by Excel statistical functions. Linear and moving average trends were graphed using MS Power Point trend line function.

RESULTS AND DISCUSSION

Routes were established and run on 12 Wildlife Management Areas (WMA), 2 private tracts, and on the Catahoula Ranger District (R.D). of the Kisatchie National Forest. Wildlife

Management Areas with routes were: Bens Creek, Big Lake, Bodcau, Boise-Vernon, Fort Polk, Jackson-Bienville, Red River, Sherburne, Sicily Island, Three Rivers, Union, and West Bay. The private tracts were Mosher Hill Hunting Club in Washington Parish and a tract bordering the Amite River in Livingston Parish. A total of 208 observation-days comprising 937 stops were recorded and used in the analyses.

Gobbling activity varied among routes. Mean gobbles per stop ranged from 0.18 on West Bay WMA to 9.02 on Sicily Island WMA (Table 1). Mean individual gobblers per route ranged from 0.13 on West Bay WMA to 9.0 on Big Lake WMA. Significant negative trends were observed for both measures of gobbling activity for Union WMA (Fig. 1). Mosher Hill and Bens Creek WMA exhibited significant positive trends for birds per route (Figs. 2-3). The Amite River route exhibited a significant positive trend for gobbles per stop (Fig. 4). Nonsignificant negative trends for both measures of gobbling activity were recorded on Sicily Island WMA. (Fig. 5). Nonsignificant positive trends were observed for both measures of gobbling activity on Three Rivers and Big Lake WMAs (Figs. 6-7). Sherburne, West Bay, and Bodcau WMAs exhibited no discernable trends (Figs. 8-10). Jackson Bienville WMA, Red River WMA, Ft. Polk, and the Catahoula R.D. exhibited no discernable trend for one measure of gobbling activity and a nonsignificant negative trend for the other (Figs. 11-14). Boise-Vernon WMA data was insufficient to graph and conduct a trend analysis.

The combined north Louisiana routes exhibited no discernable trend for gobbles per stop and a nonsignificant negative trend for individual gobblers per stop (Figs. 15-16). The combined south Louisiana routes showed a nonsignificant positive trend for both measures of gobbling activity (Figs. 17-18). The combined statewide routes exhibited nonsignificant positive trends for both measures of gobbling activity. (Figs. 19-20).

Date of high count for gobbles per stop varied among routes (Table 1). Highest counts for gobbles per stop were recorded during the week of 8-13 March for 2 routes, during the week of 14-20 March for 4 routes, and during the week of 21-26 March for 8 routes. In order to reduce the influence of a single, possibly aberrant high count, the 3 highest counts per route were tabulated and routes pooled for a regional measure of weekly gobbling activity (Table 2). The amount of gobbling was high during the first and second weeks of the survey in south Louisiana, but declined during the third week. However, the number of gobbling birds increased by the third week. In north Louisiana, the amount of gobbling and the number of gobbling birds declined slightly from the first to the third week.

Gobbling activity was more intense than that observed in 2003. Except for the Bens Creek WMA and Mosher Hill routes, the 2004 mean values for both measures of gobbling activity were higher than the 2003 mean values on every route. The highest mean value for gobbles per stop (9.02) since the inception of the survey was recorded from Sicily Island WMA this year. Similarly, the highest mean number of gobblers per route (9.0) since the survey began was recorded from Big Lake WMA this season. The north Louisiana mean values for gobbles per stop and gobblers per stop were the highest recorded since the survey began. The presence of high gobbling activity early in the survey period precluded the development of an increasing trend on many of the routes. March temperatures averaged 3 degrees above normal across the state. This warm weather probably contributed high levels of gobbling activity throughout the

survey period.

Caution should be used in interpreting the data relative to gobbling peaks. The levels of gobbling activity fluctuated daily on most routes with high counts one day and often zeroes the next. Weather or other disturbance factors can have profound effects on gobbling activity on any given day. Trends and sustained high levels of gobbling activity, such as depicted by the 3-period moving average, should be used to determine gobbling activity peaks

Table 1. Summary statistics from Louisiana gobbling activity survey, 8 March - 26 March, 2004.

Route Date(s)	Dates	Stops	N	Mean	SE	Gobbles Per Stop		High Week (Mean)	Individual Gobblers			
						Range	High Date		Mean	SE	Range	High
Amite River	3/8 – 3/26	4	15	4.48	1.05	0 – 11.5	3/20	3/21 - 3/26 (8.3/stop)	3.3	0.61	0 - 7	3/20
Bens Creek	3/8 – 3/26	4	15	0.83	0.47	0 – 7.3	3/25	3/21 - 3/26 (1.9/stop)	0.9	0.27	0 - 3	3/25
Big Lake	3/8 – 3/23	4	9	5.19	0.99	0.7 - 9.5	3/12	3/21 – 3/26 (6.9/stop)	9.0	1.72	1 - 16	3/23
Bodcau	3/8 – 3/26	4	15	3.12	1.19	0 – 17.3	3/16	3/14 - 3/20 (4.2/stop)	1.5	0.36	0 – 5	3/16
Boise-Vernon	3/8 – 3/22	5	7	1.91	1.09	0 – 8.0	3/9	-	2.6	1.13	0 – 8	3/9
Catahoula R.D.	3/8 - 3/26	5	14	3.37	0.72	0 – 7.2	3/17, 3/23	3/21 – 3/26 (3.9/stop)	2.4	0.58	0 – 7	3/17
Ft. Polk	3/8 - 3/26	5	15	0.76	0.15	0 – 1.8	3/23	3/21 – 3/26 (0.9/stop)	1.9	0.34	0 – 5	3/10
Jackson - Bienville	3/8 - 3/26	5	15	2.53	0.78	0 – 10.6	3/17	3/14 – 3/20 (3.9/stop)	3.2	0.79	0 – 10	3/17
Mosher Hill H.C.	3/8 - 3/26	4	15	0.35	0.17	0 – 2	3/25	3/21 – 3/26 (0.7/stop)	0.47	0.19	0 – 2	3/17, 3/25
Red River	3/8 - 3/26	4	15	5.17	1.55	0 – 16	3/11	3/8 – 3/13 (8.2/stop)	2.67	0.70	0 – 8	3/17
Sherburne	3/8 - 3/26	7 ^a	15	7.34	1.84	0.5 – 24.4	3/17	3/14 – 3/20 (9.9/stop)	5.13	0.80	1 – 11	3/23
Sicily Island	3/8 – 3/26	4	15	9.02	2.01	0.5 – 27	3/23	3/8 – 3/12 (12.8/stop)	7.87	1.24	1 – 18	3/11
Three Rivers	3/8 - 3/26	4	13	6.17	3.11	0 – 40.0	3/24	3/21 – 3/26 (12.5/stop)	3.23	1.08	0 – 11	3/24

Table 1. Cont'd

Route Date(s)	Dates	Stops	N	Mean	SE	Gobblers Per Stop			Individual Gobblers			
						Range	High Date	High Week (Mean)	Mean	SE	Range	High
Union	3/8 - 3/26	5	15	6.38	1.35	0 – 17.2	3/17	3/14 – 3/20 (9.1/stop)	3.87	0.52	0 – 6	3/8, 3/16, 3/17, 3/18
West Bay	3/9 – 3/26	4	15	0.18	0.07	0 – 0.8	3/22	3/22 – 3/26 (0.2/stop)	0.40	0.13	0 – 1	3/12, 13, 15, 18, 22, 23
N. LA ^b	3/8 - 3/26	23 - 27	15	5.64	1.34	2.1 – 23.0	3/17	3/14 – 3/20 (7.6/stop)	0.95 ^c	0.12 ^c	0.2 – 1.7 ^c	3/23
S. LA ^d	3/8 - 3/26	4 - 36	17	3.67	0.71	0.2 – 10.1	3/24	3/21 – 3/26 (4.86/stop)	0.53 ^c	0.07 ^c	0.1 – 1.1 ^c	3/23
Statewide	3/8 - 3/26	4 - 63	17	4.08	0.60	0.3 – 9.8	3/17	3/14 – 3/20 (4.7/stop)	0.70	0.08	0.3 – 1.4	3/23

a Consists of 2 routes of 3 and 4 stops each, run simultaneously

b Includes Big Lake WMA, Bodcau WMA, Catahoula R.D, Jackson - Bienville WMA, Sicily Island Hills WMA, Union WMA

c Expressed as individual gobblers **per stop**

d Includes Amite River, Bens Creek WMA, Boise-Vernon WMA, Mosher Hill H.C., Red River WMA, Sherburne WMA, Three Rivers WMA, West Bay WMA

Table 2. Weekly occurrence of 3 highest values from each route for 2004 Louisiana gobbling activity survey.

Region Gobblers	Week	Percent of Stops	<u>Occurrence of highest values (%)</u>	
			Gobbles per Stop	Individual
North Louisiana	8 -13 March	34.5	38.7	38.1
	14 - 20 March	32.6	27.8	42.9
	21 - 26 March	32.9	33.3	19.0
South Louisiana	8 -13 March	35.5	40.0	21.4
	14 - 20 March	33.1	40.0	25.0
	21 - 26 March	31.4	20.0	53.6
Statewide	8 -13 March	35.1	36.6	28.6
	14 - 20 March	32.9	26.8	32.7
	21 - 26 March	32.0	36.6	38.8

Gobbling Activity Routes

Union WMA - 2004

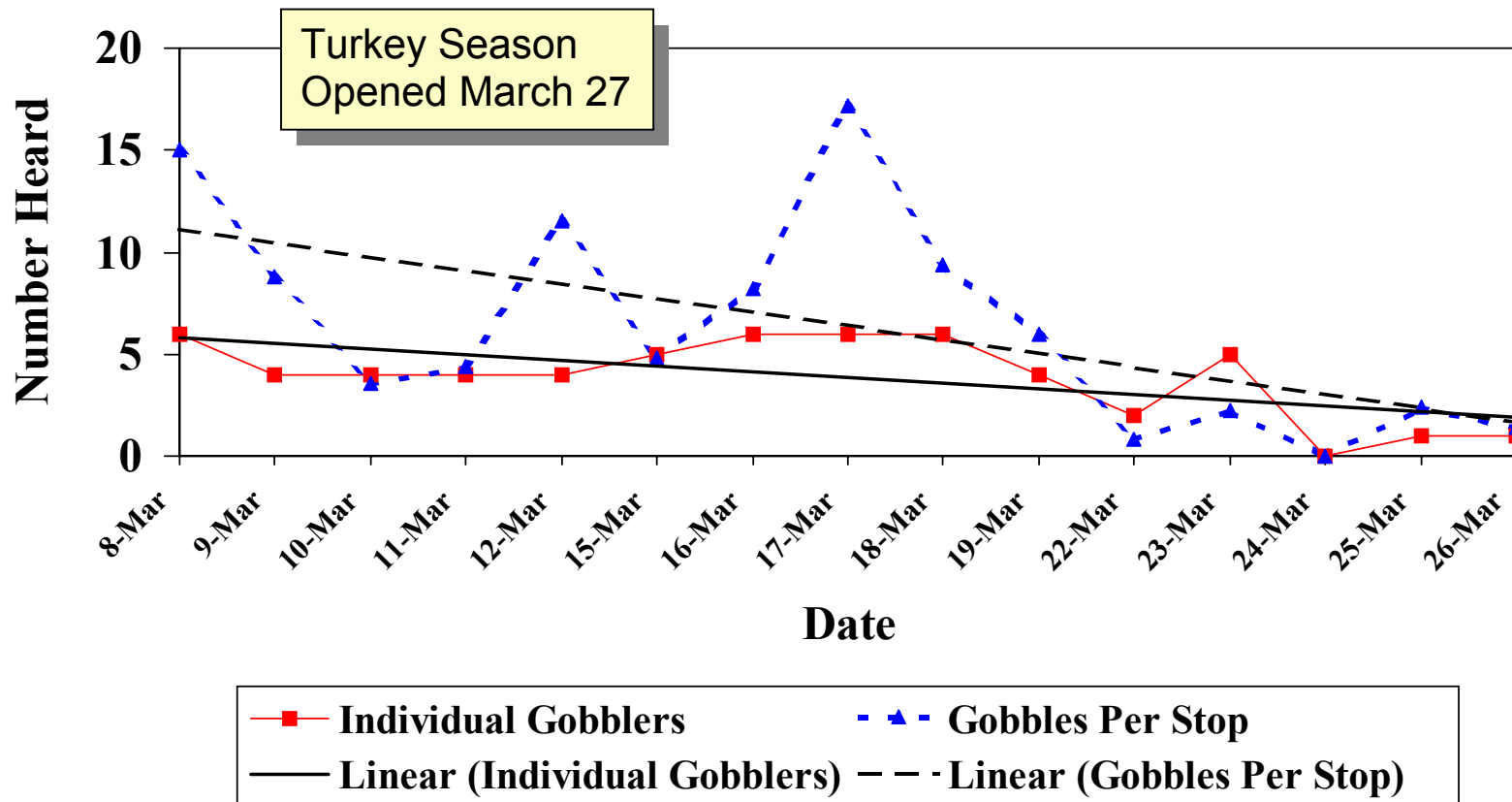


Figure 1.

Gobbling Activity Routes

Mosher Hill H.C. - 2004

Washington Parish

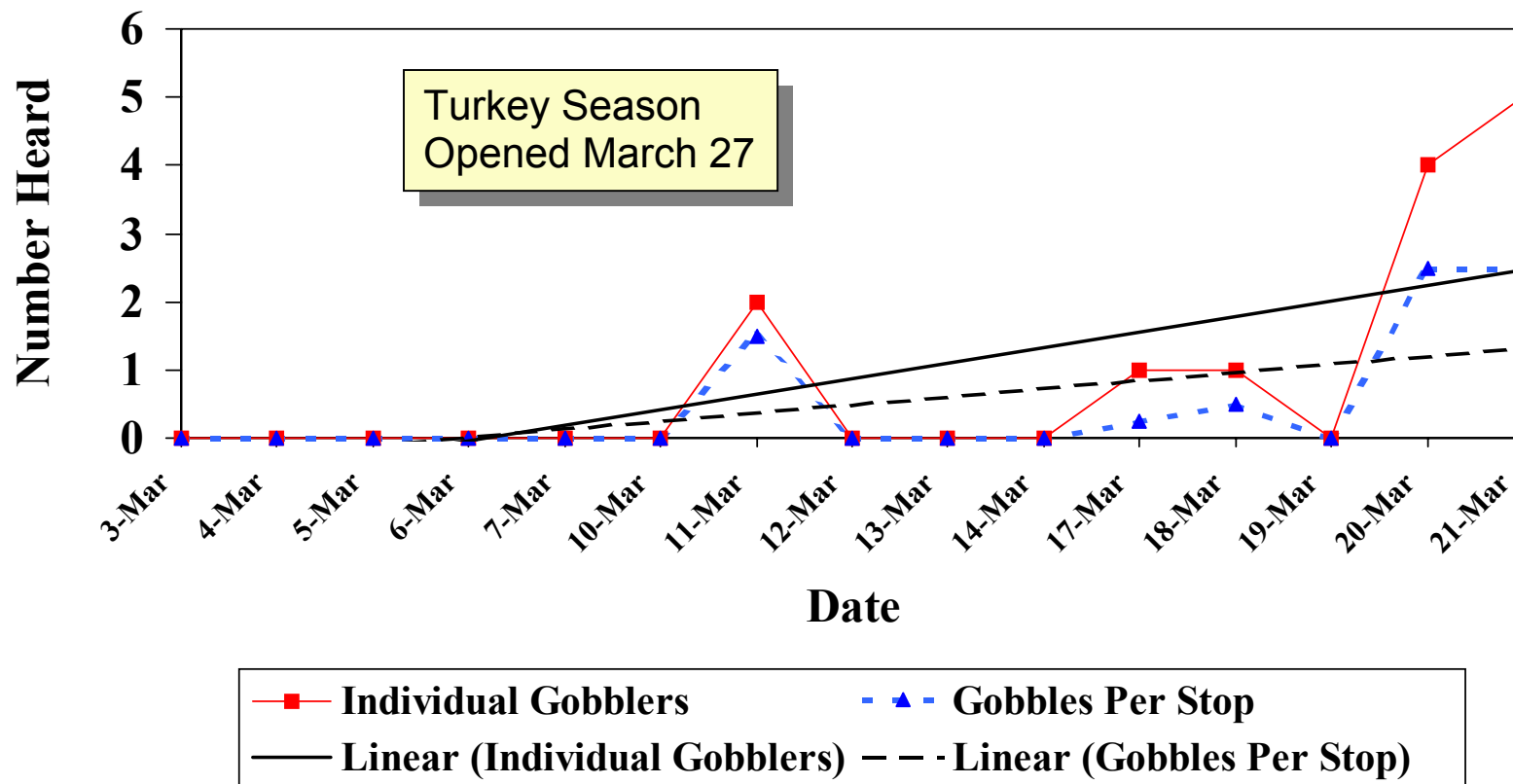


Figure 2.

Gobbling Activity Routes

Ben's Creek WMA - 2004

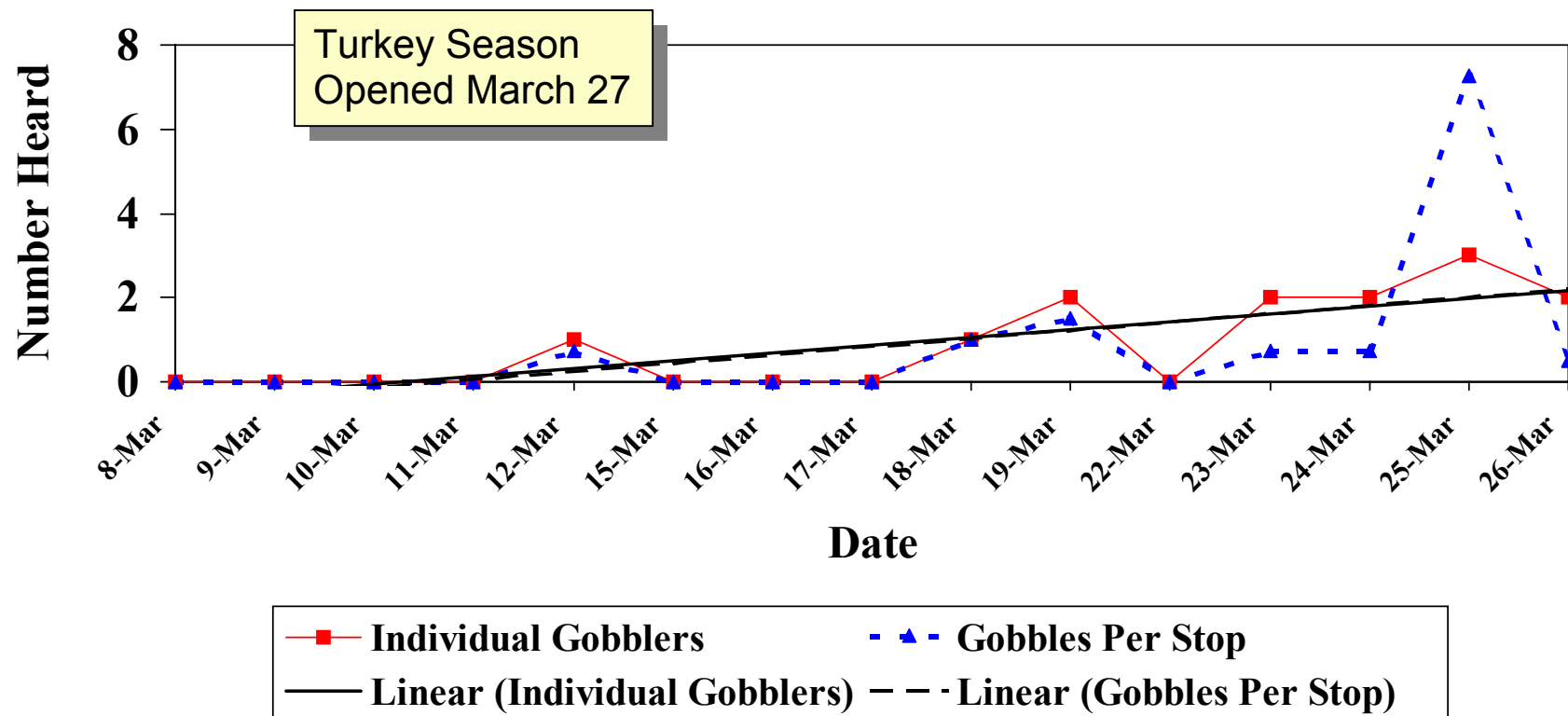


Figure 3.

Gobbling Activity Routes

Amite River - 2004

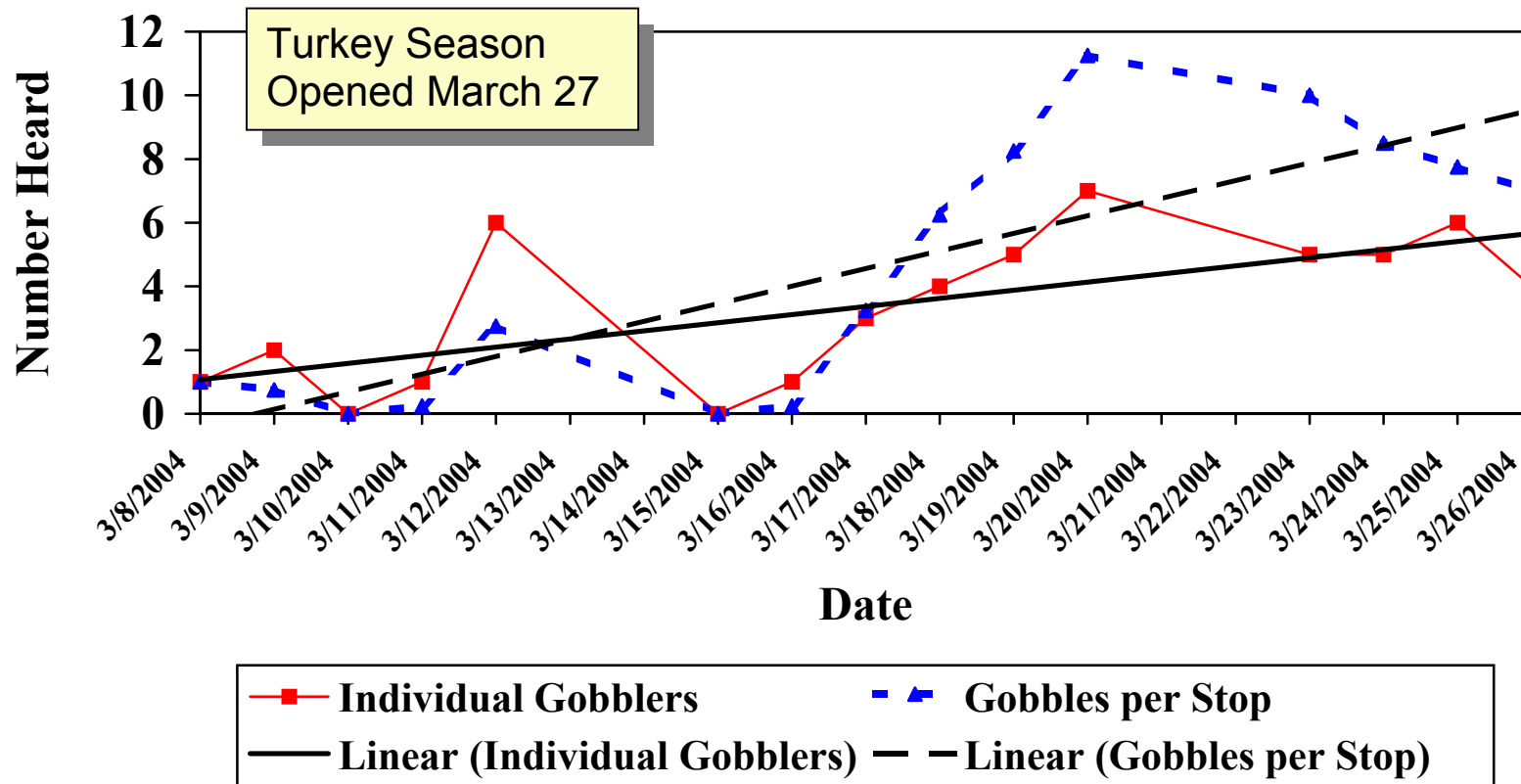


Figure 4.

Gobbling Activity Routes

Sicily Island WMA - 2004

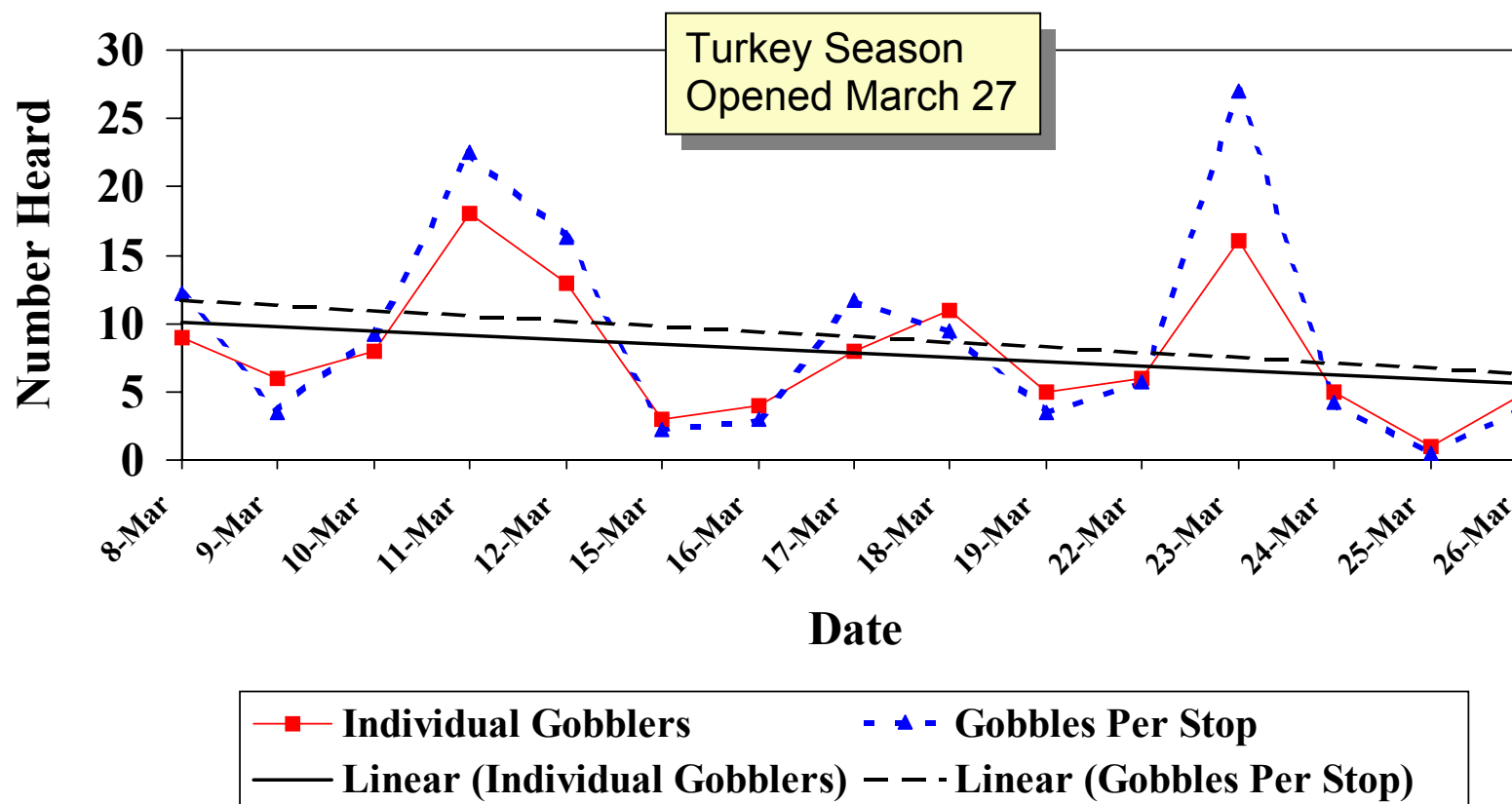


Figure 5.

Gobbling Activity Routes

Three Rivers WMA - 2004

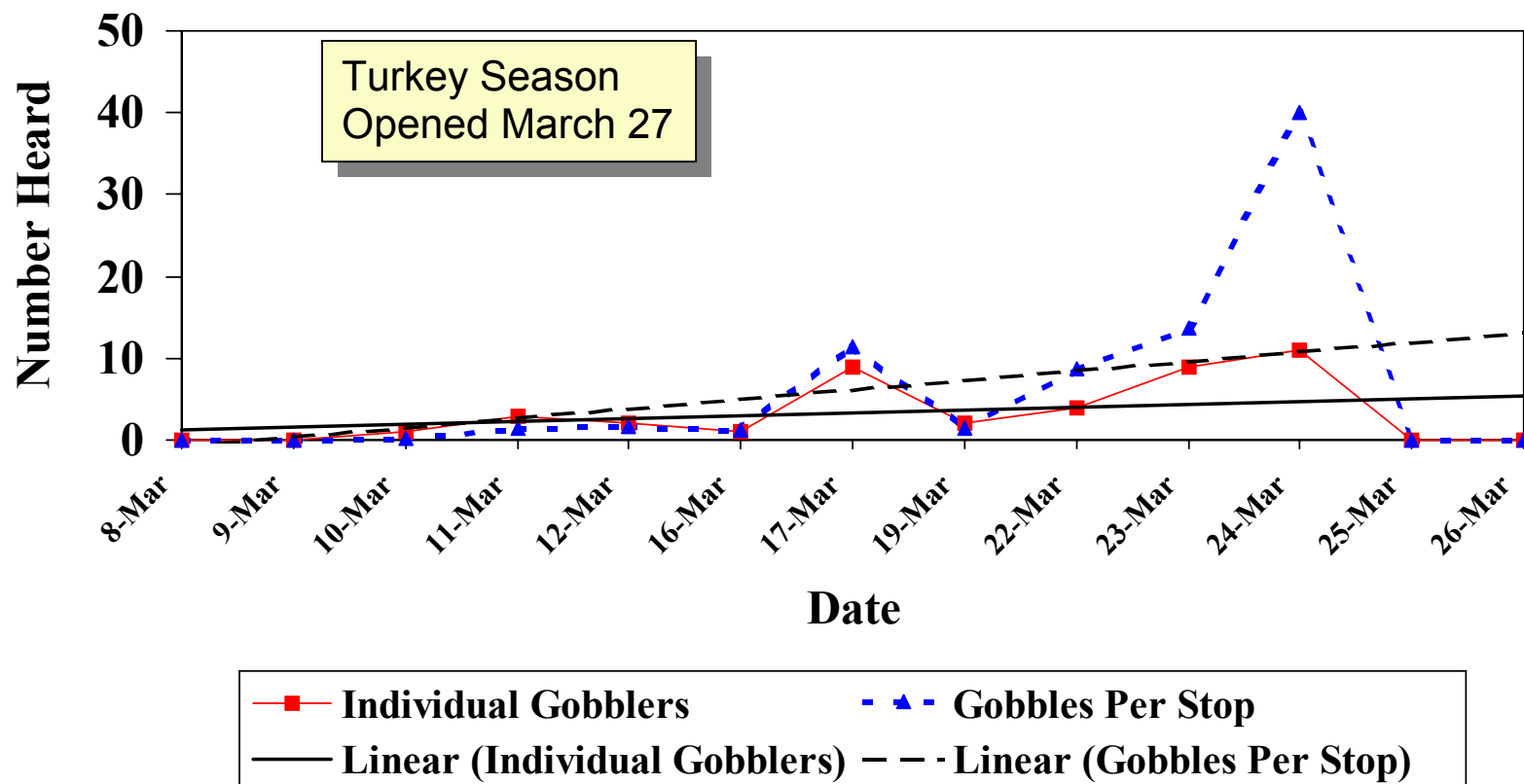


Figure 6.

Gobbling Activity Routes

Big Lake WMA - 2004

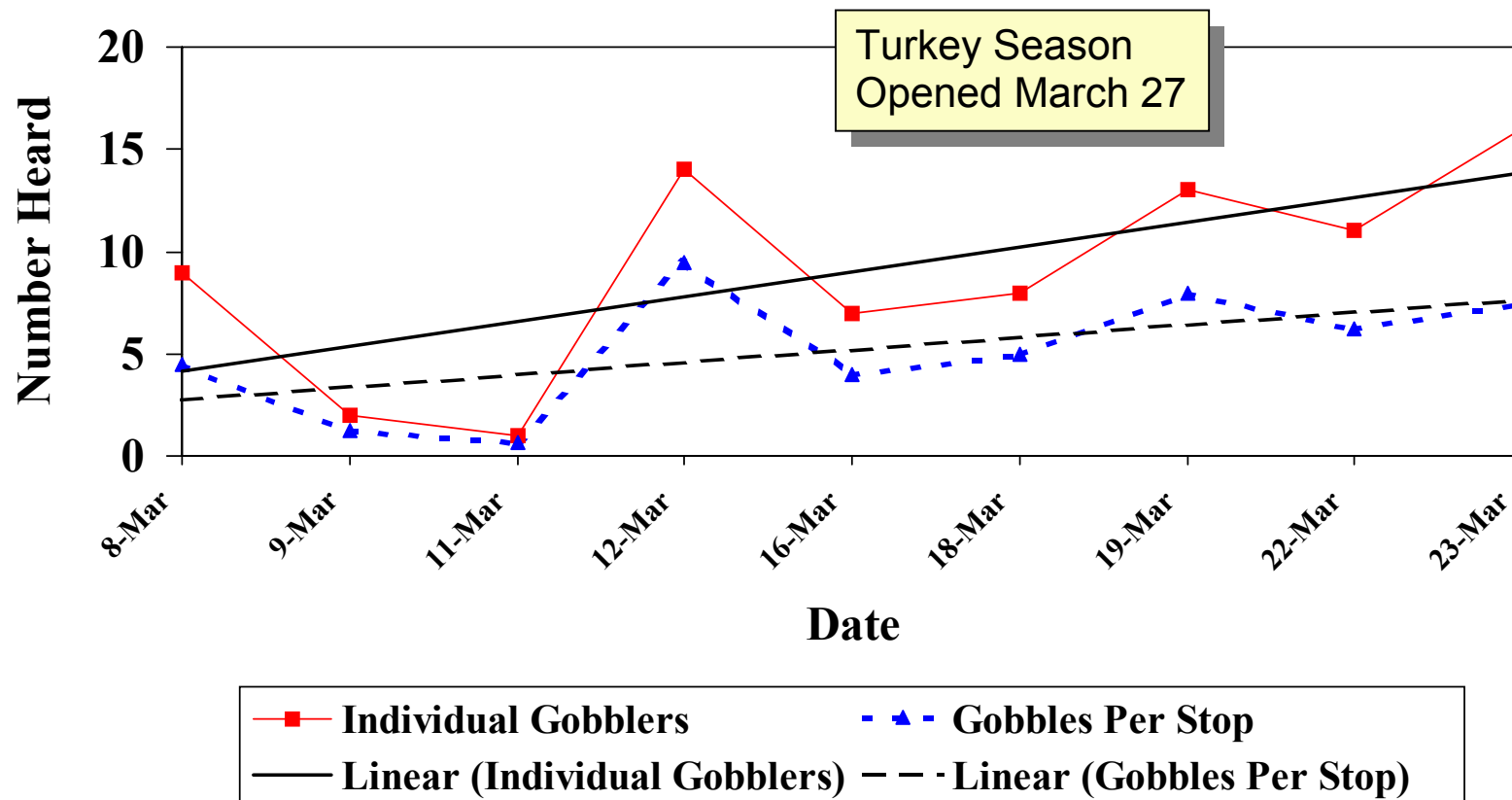


Figure 7.

Gobbling Activity Routes

Sherburne WMA - 2004

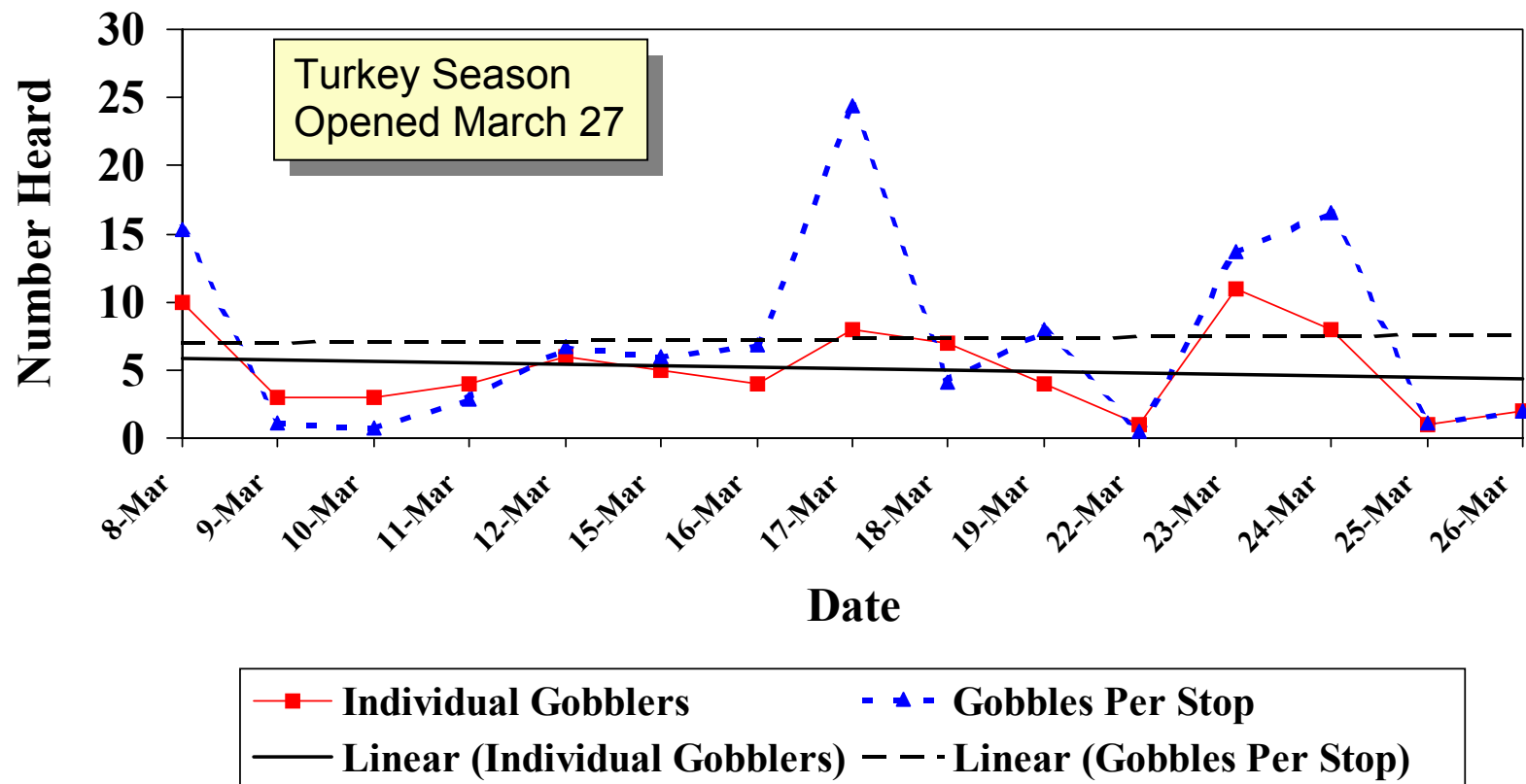


Figure 8.

Gobbling Activity Routes

West Bay WMA - 2004

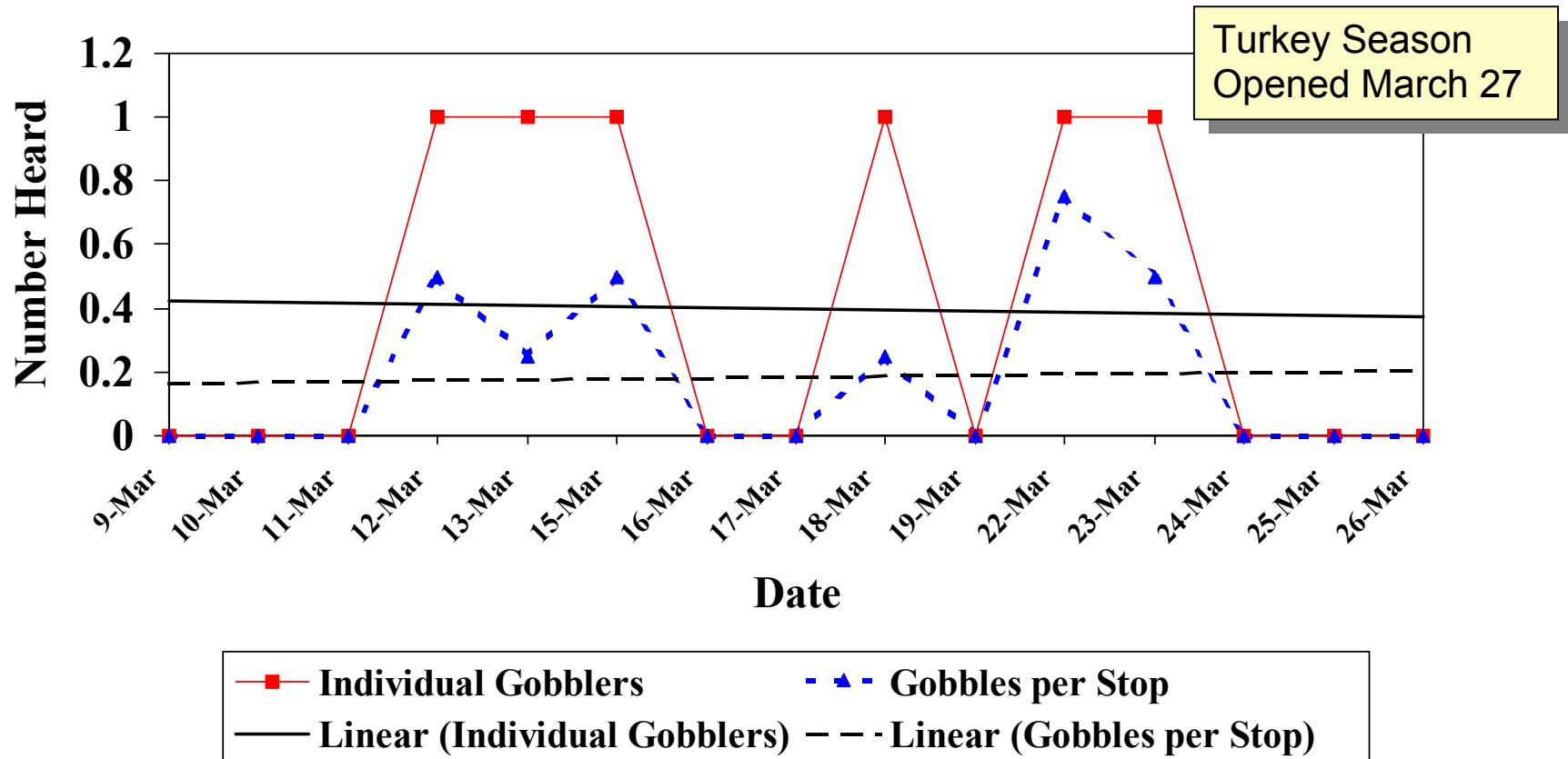


Figure 9.

Gobbling Activity Routes

Bodcau WMA - 2004

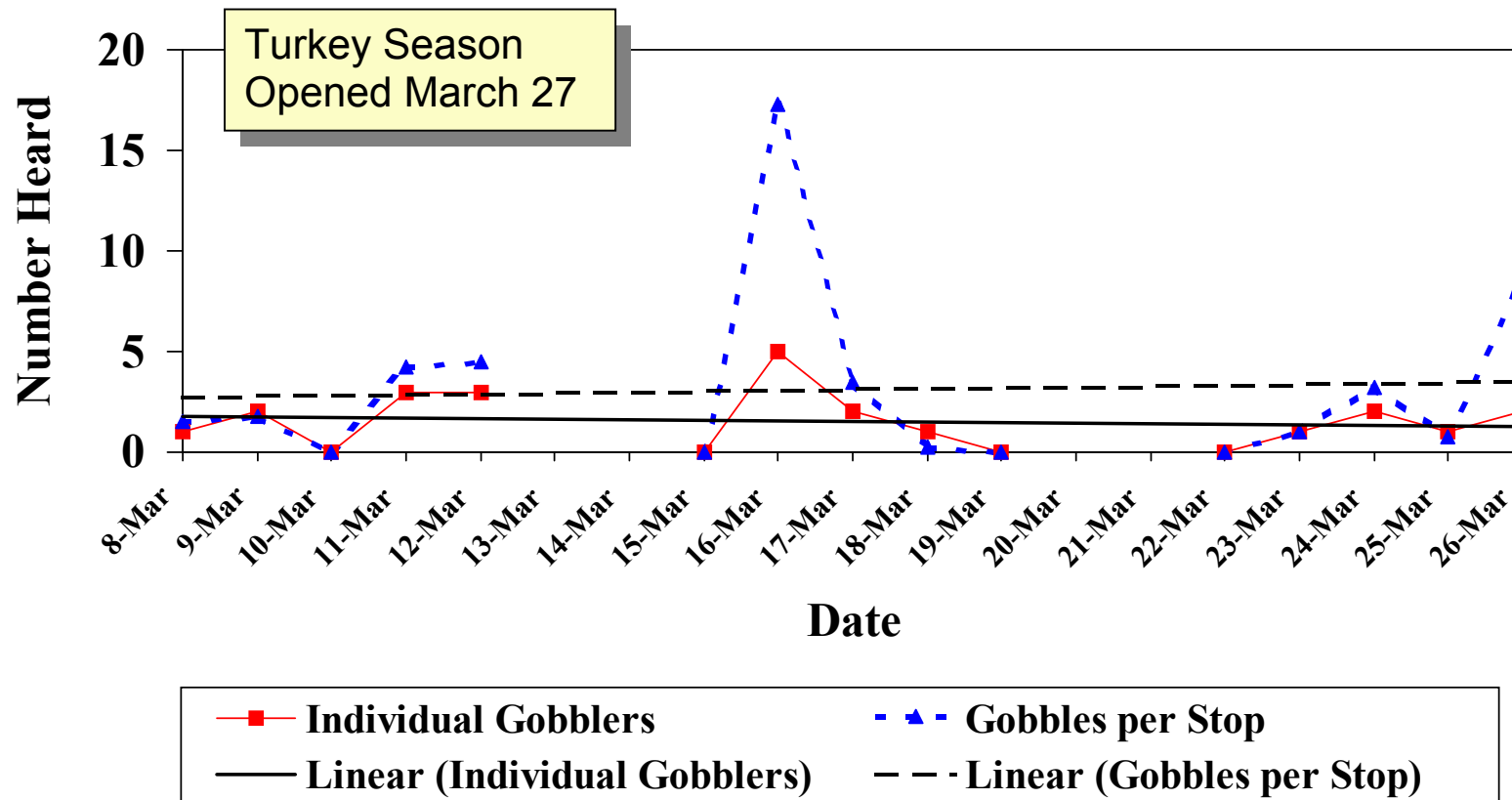


Figure 10.

Gobbling Activity Routes

Jackson-Bienville WMA - 2004

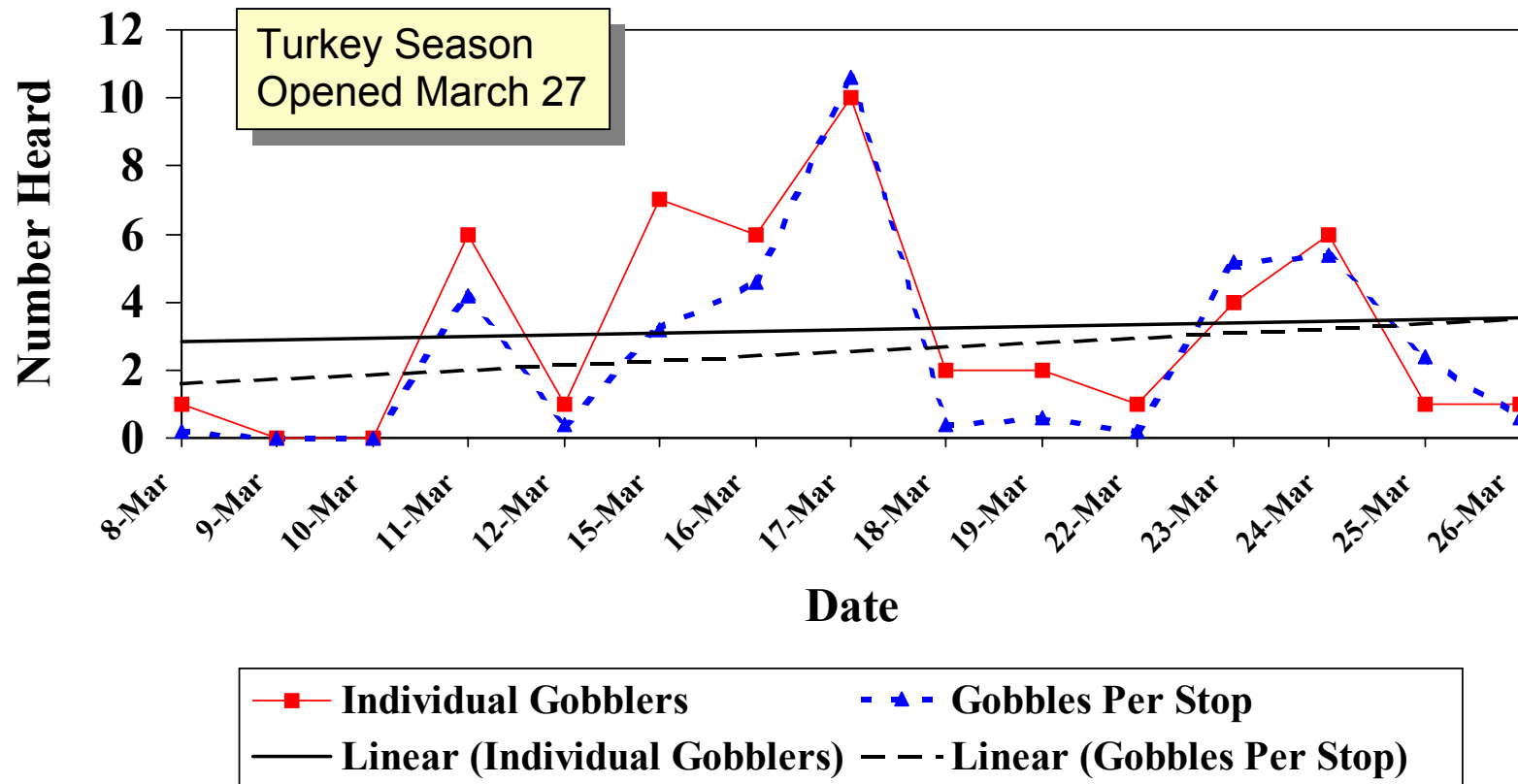


Figure 11.

Gobbling Activity Routes

Red River WMA - 2004

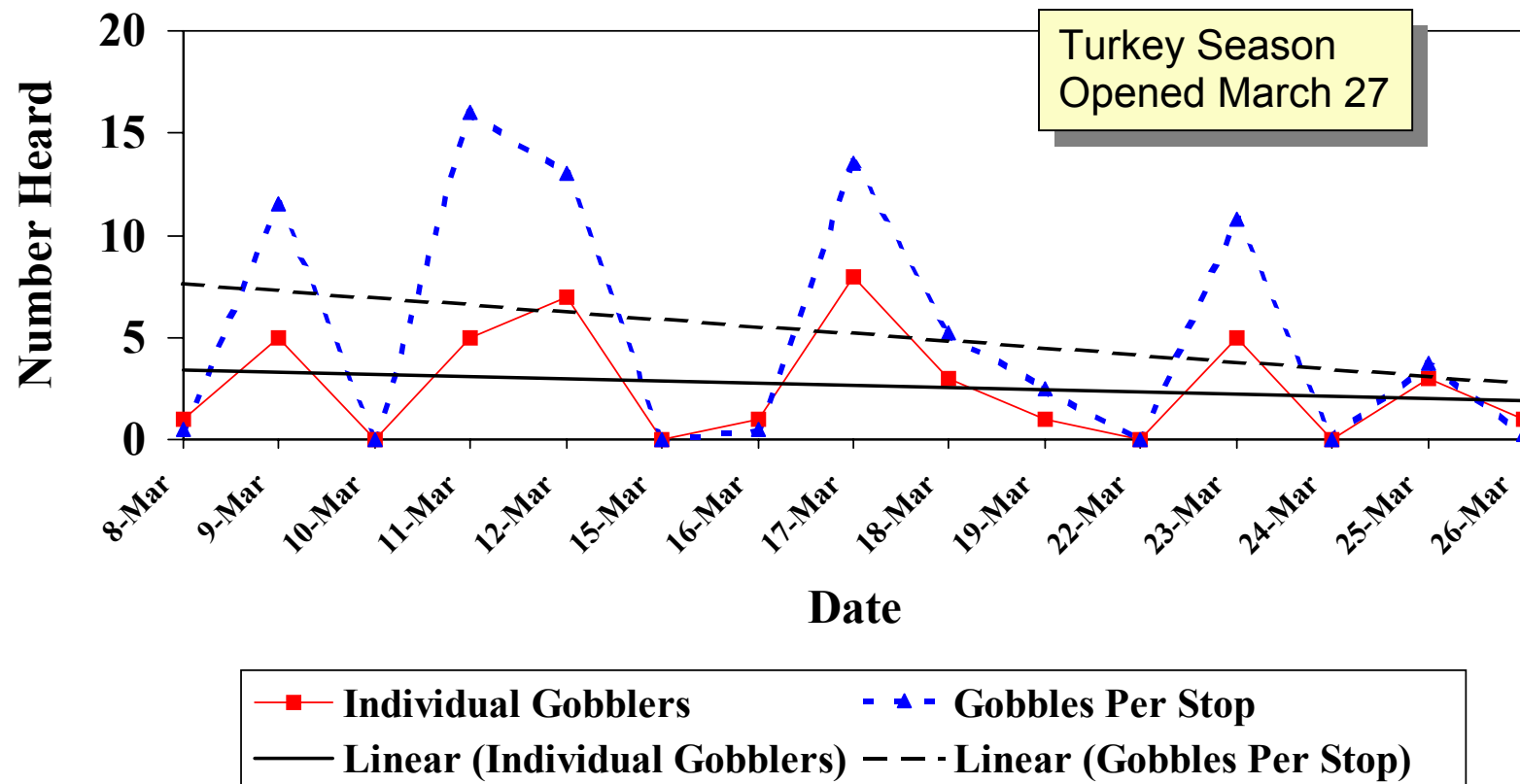


Figure 12.

Gobbling Activity Routes

Fort Polk WMA - 2004

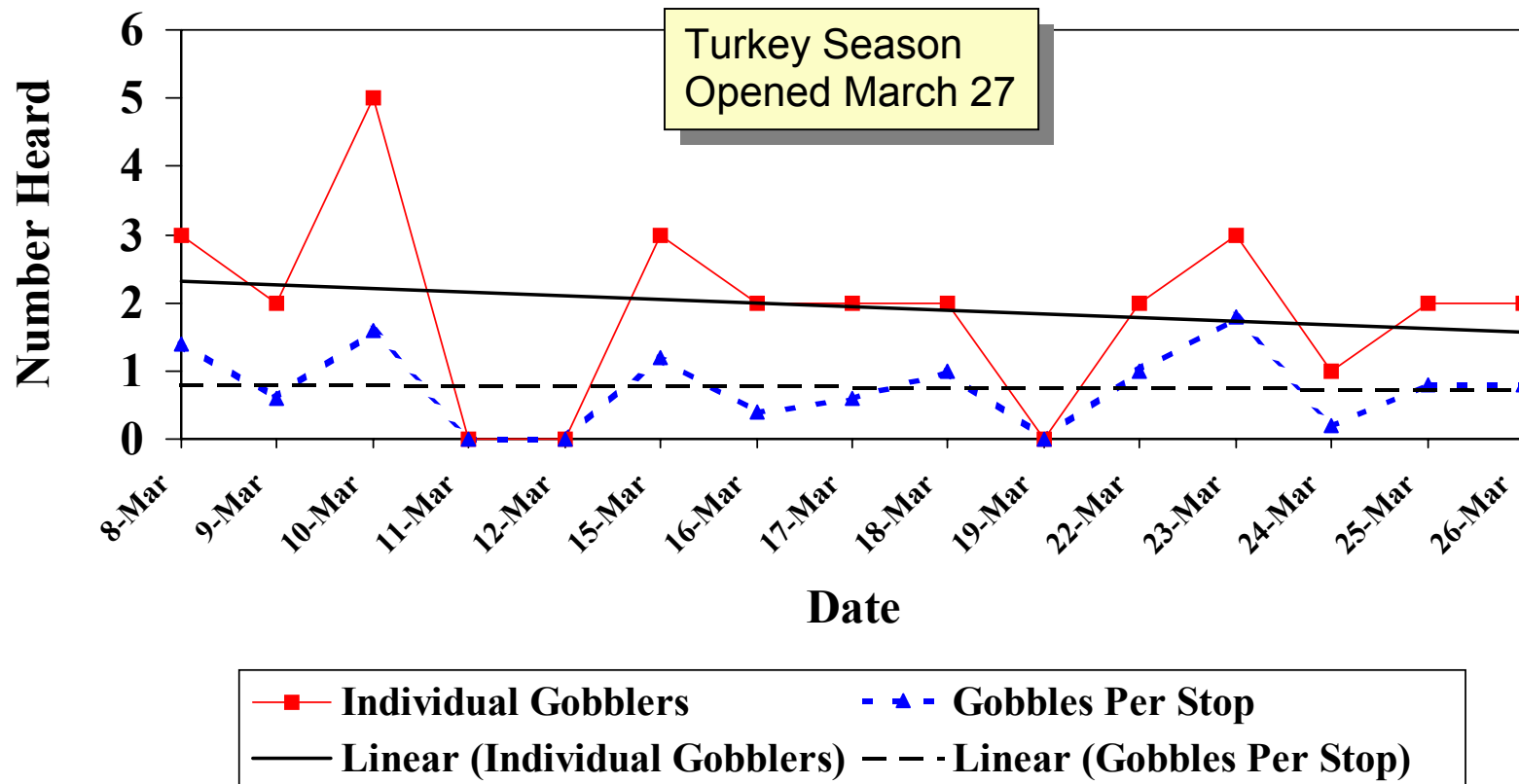


Figure 13.

Gobbling Activity Routes

Catahoula R.D. - 2004

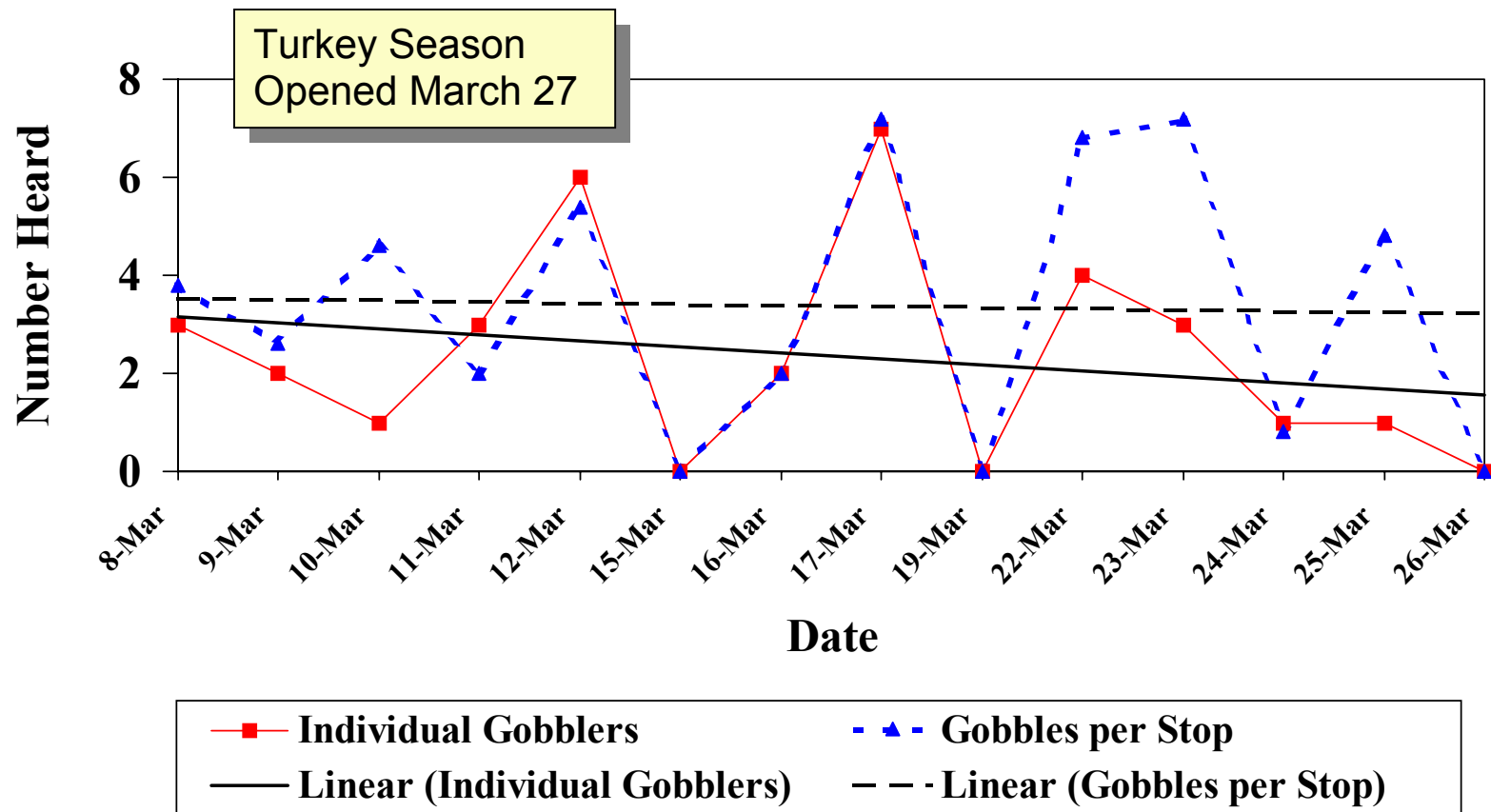


Figure 14.

Gobbling Activity Routes

North Louisiana - 2004

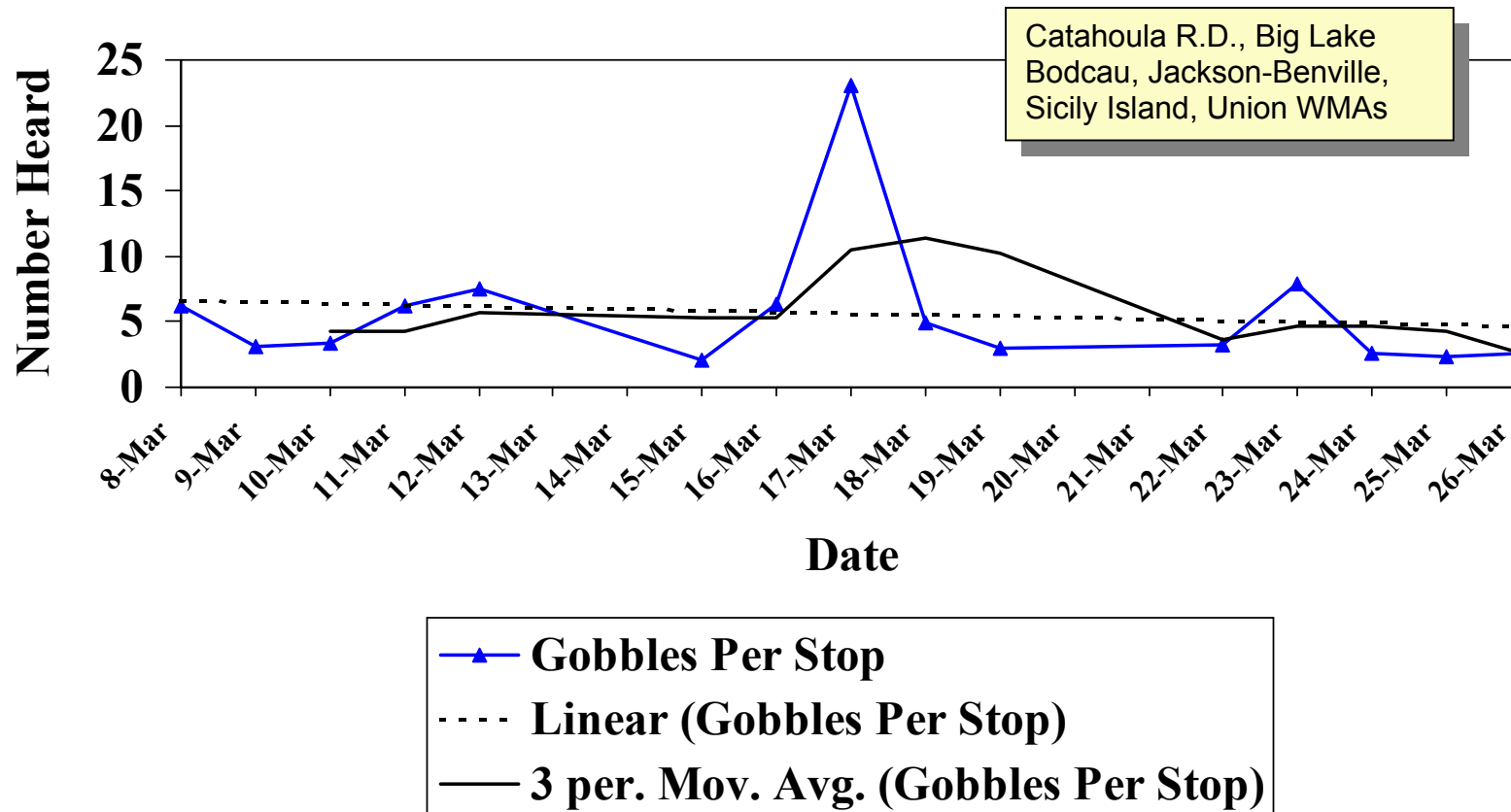


Figure 15.

Gobbling Activity Routes

North Louisiana - 2004

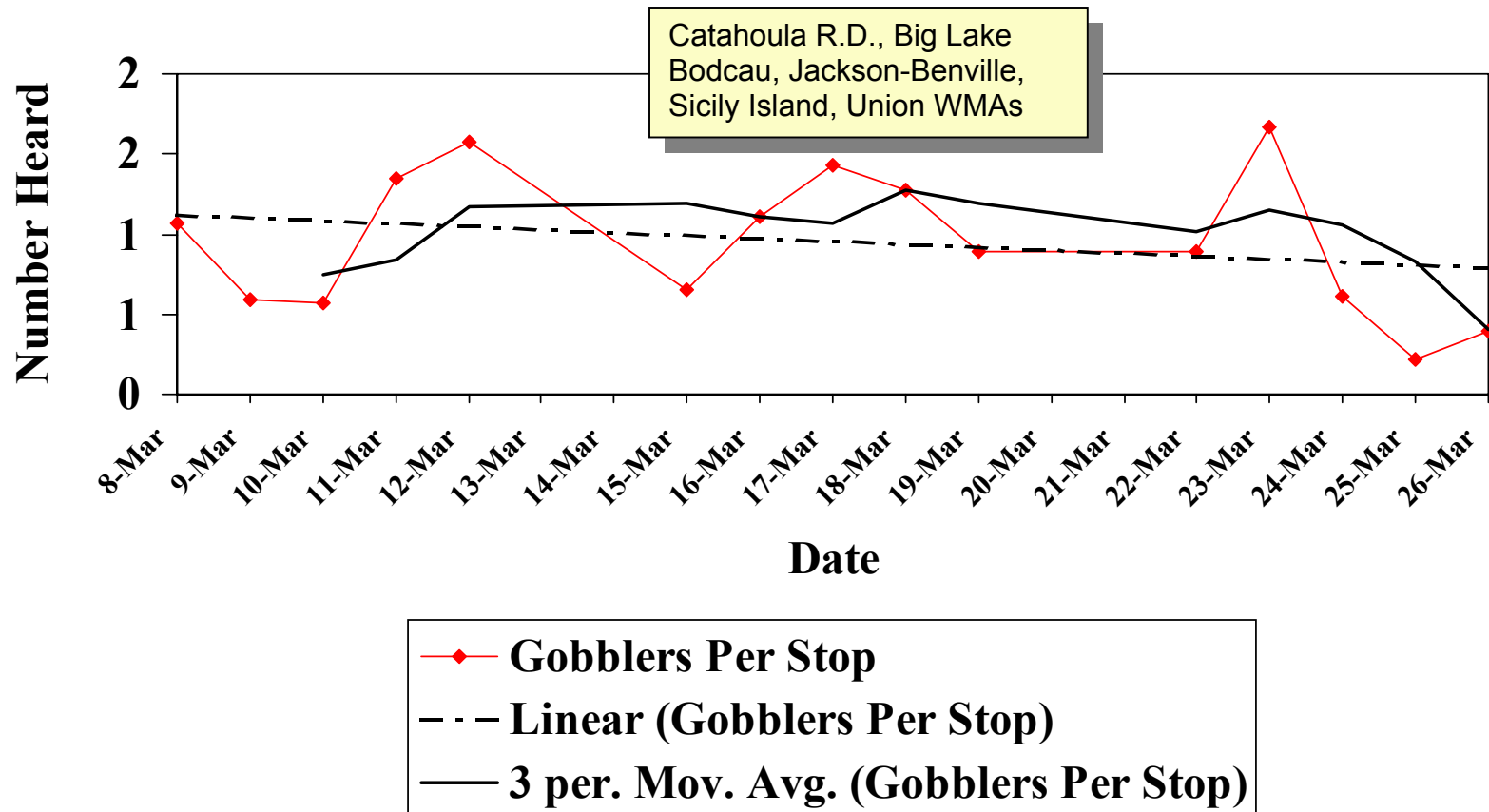


Figure 16.

Gobbling Activity Routes

South Louisiana - 2004

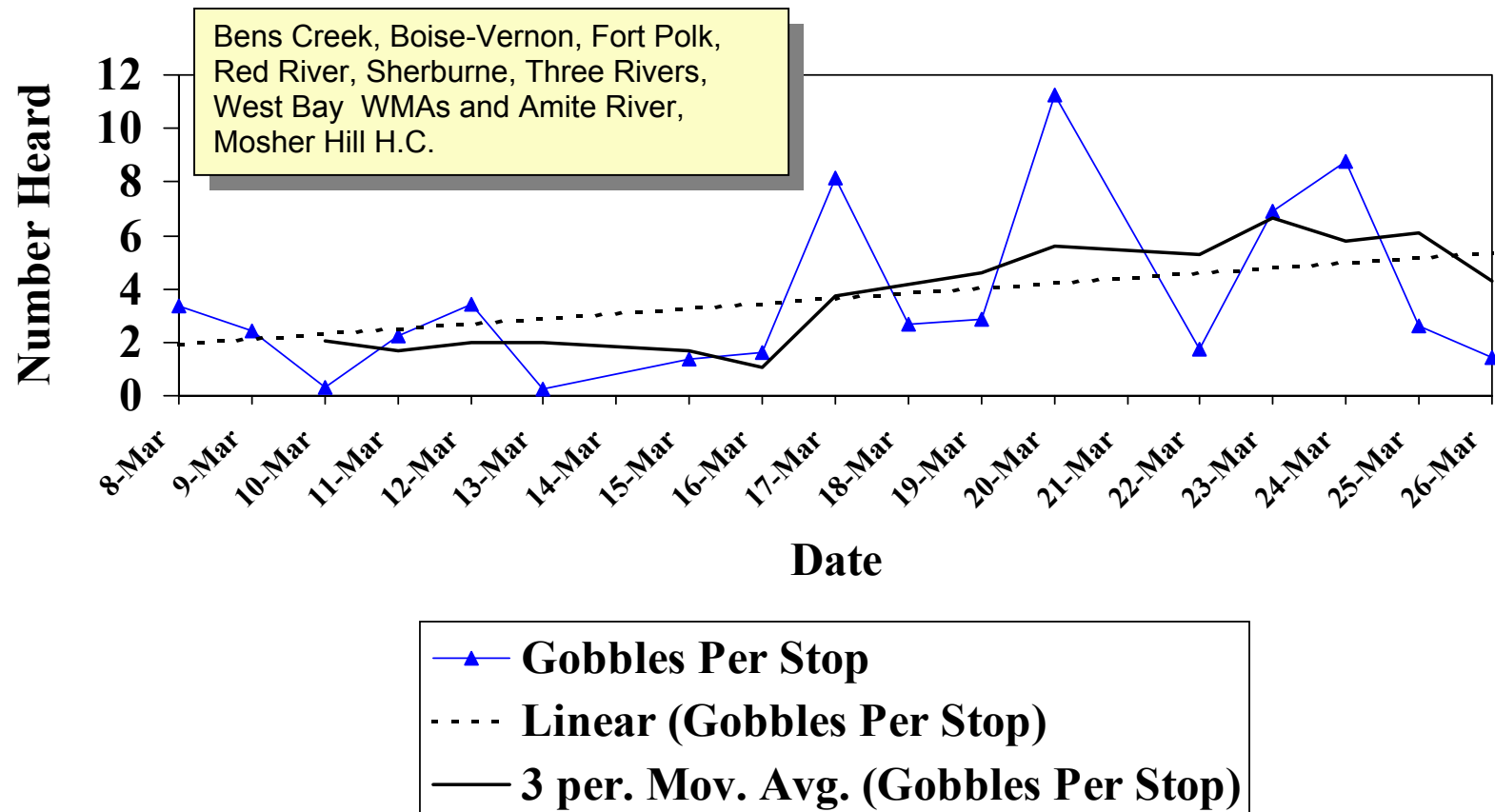


Figure 17.

Gobbling Activity Routes

South Louisiana - 2004

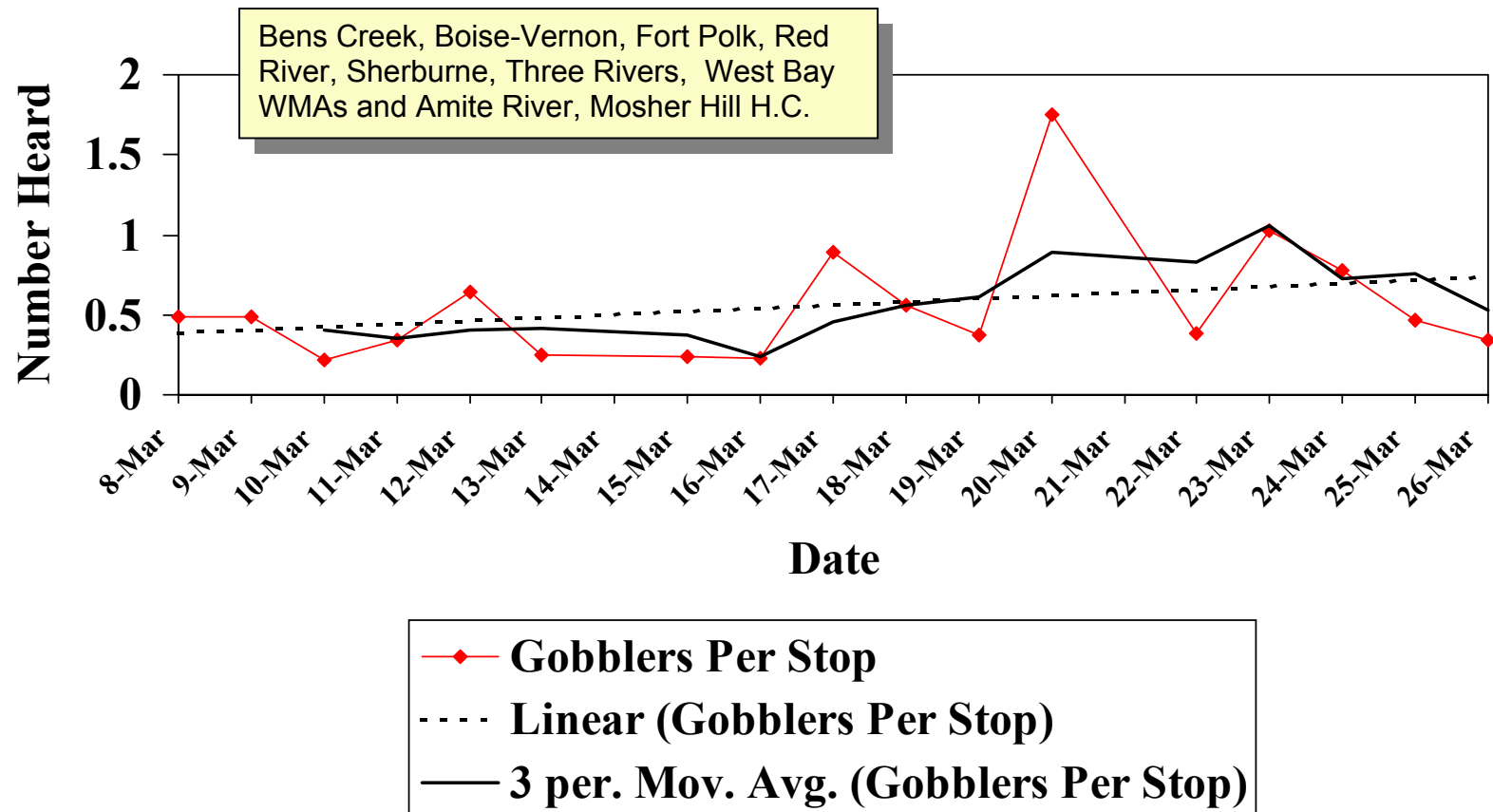


Figure 18.

Gobbling Activity Routes

Statewide - 2004

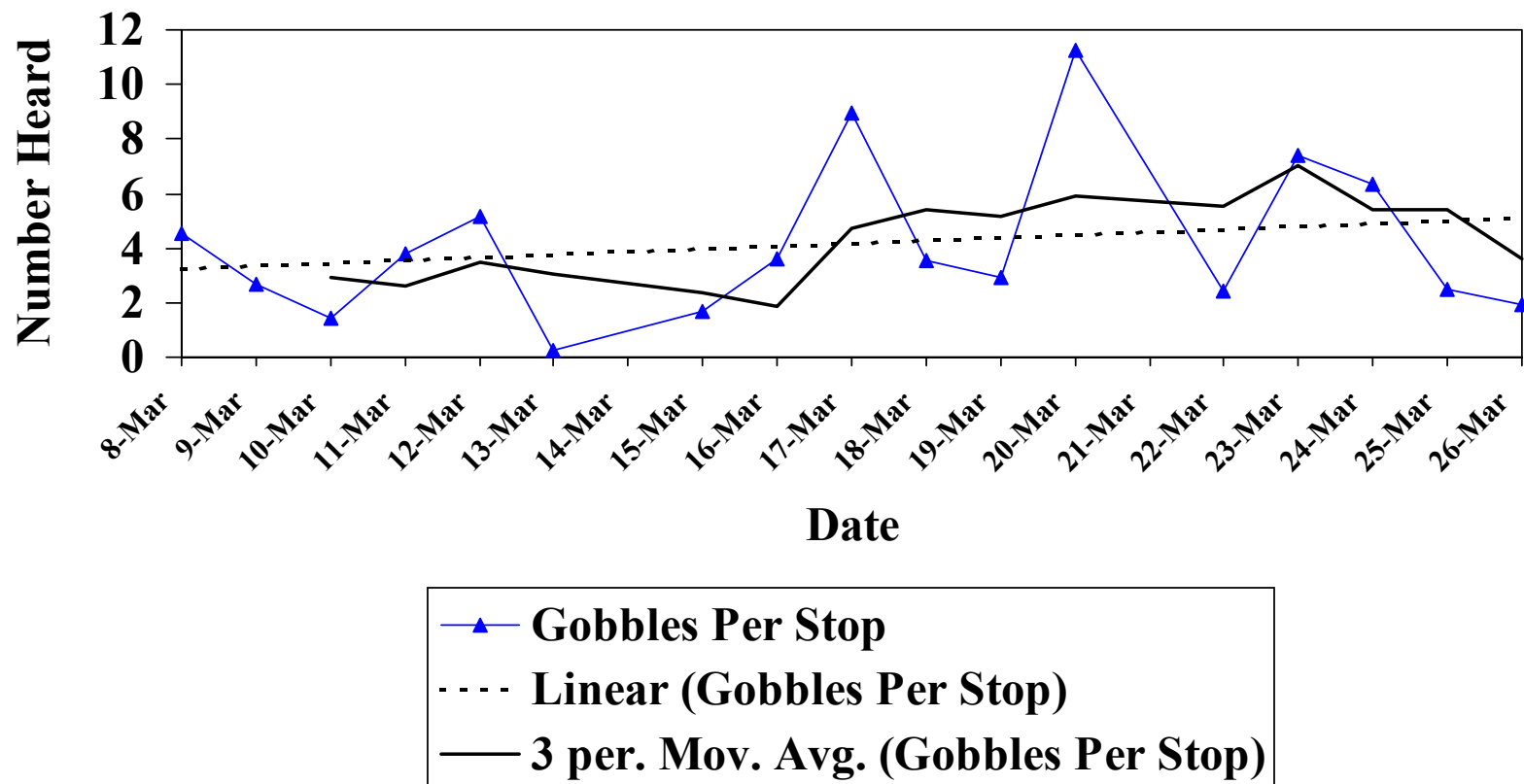


Figure 19.

Gobbling Activity Routes

Statewide - 2004

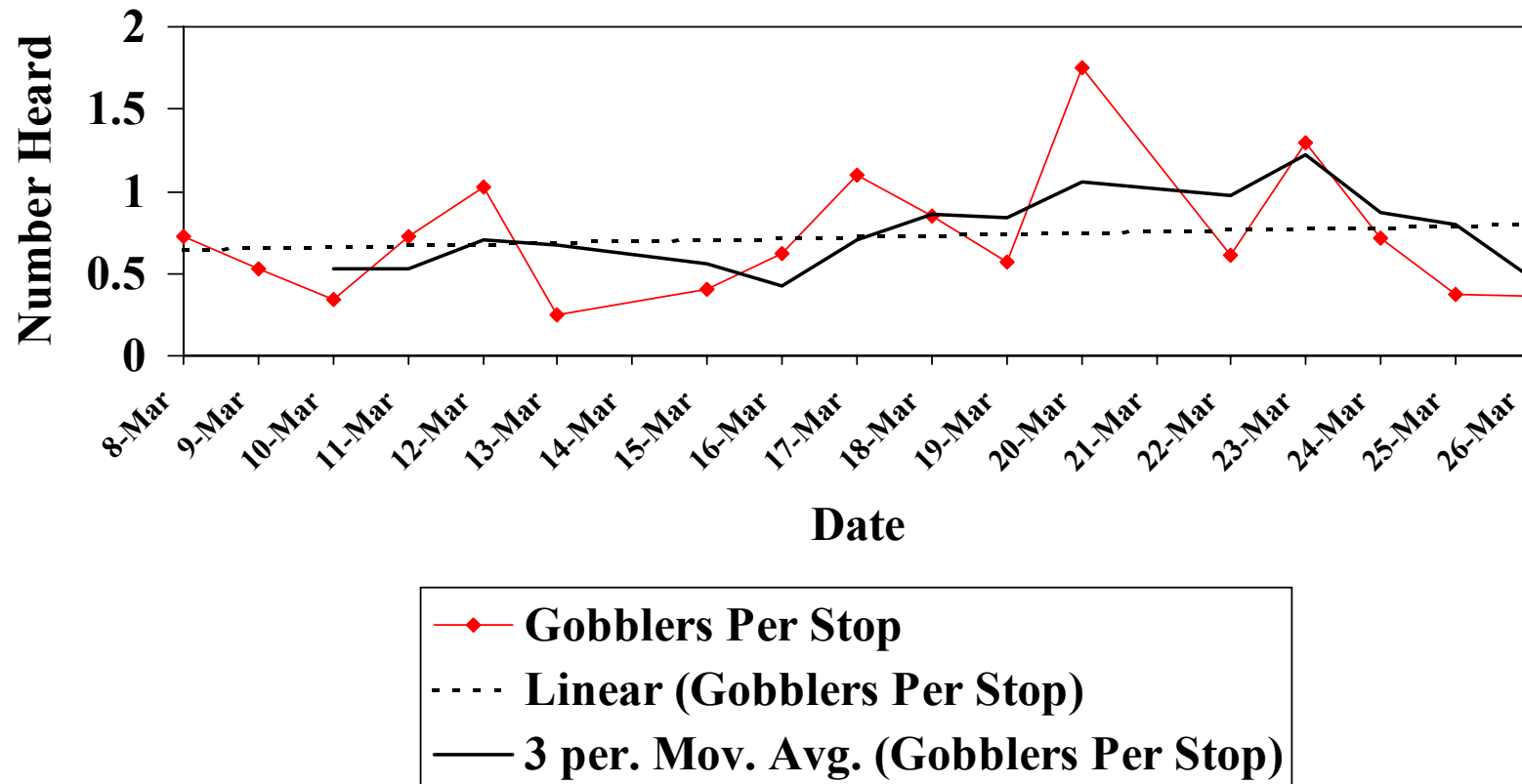


Figure 20.

Appendix

Amite River (Livingston Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2004	3/8 - 26	4	4.48	1.05	0 – 11.5	3/20	3.3	0.61	0 – 7	3/20

Bens Creek WMA (Washington Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
1999	3/15 - 26	4	2.28	0.52	0-4.8	3/24	2.9	0.67	0 - 6	3/23,3/24
2000	3/6 - 24	4	2.54	0.76	0 - 8.0	3/21	2.4	0.58	0 - 6	3/22, 3/23
2001	3/5 - 23	4	0.48	0.24	0 - 3.5	3/23	0.8	0.34	0 - 5	3/23
2002	3/4 - 22	4	2.20	0.80	0 – 9.0	3/19	2.2	0.63	0 - 8	3/20
2003	3/3 - 21	4	0.52	0.21	0 – 3.0	3/20	1.1	0.41	0 – 5	3/20
2004	3/8 – 26	4	0.83	0.47	0 - 7.3	3/25	0.9	0.27	0 – 3	3/25

Big Lake WMA (Franklin, Madison, and Tensas Parishes)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2003	3/10-21	4	4.44	0.35	2.8 – 5.8	3/12	6.0	0.53	4 – 8	3/12,21
2004	3/8 – 23	4	5.19	0.99	0.7 – 9.5	3/12	9.0	1.72	1 – 16	3/23

Bodcau WMA 1 (Bossier Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
1999	3/15 -26	4	5.2	1.48	0 - 15.3	3/21	2.1	0.55	0 - 4	3/15, 3/18, 3/21, 3/26
2000	3/6 -24	4	4.30	1.71	0 - 21.3	3/21	2.0	0.53	0 - 6	3/21
2001	3/13 -30	4	0.65	0.40	0 - 6.0	3/23	0.7	0.28	0 - 4	3/23
2002	3/4 - 22	4	2.25	0.69	0 – 9.5	3/5	1.8	0.38	0 - 5	3/5
2003	3/3 -21	4	1.20	0.48	0 – 6.5	3/17	0.8	0.26	0 – 3	3/18
2004	3/8 – 26	4	3.12	1.19	0 – 17.3	3/16	1.5	0.36	0 – 5	3/16

Boise-Vernon WMA (Vernon Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2004	3/8 -26	4	4.48	1.05	0 – 11.5	3/20	3.3	0.61	0 – 7	3/20

Catahoula Ranger District (Grant and Winn Parishes)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
1999	3/15 - 26	4	4.83	1.48	0 - 14	3/15	3.9	0.87	0 - 8	3/22
2000	3/6 - 24	5	0.93	0.34	0 - 4.4	3/20	1.4	0.37	0 - 4	3/13, 3/20
2001	3/6 - 30	5	4.06	1.18	0 - 12.5	3/22	3.6	0.57	0 - 6	3/11, 3/18
2002	3/4 - 22	5	3.68	0.82	0 – 11.4	3/18	3.9	0.58	0 - 7	3/18, 3/22
2002	3/4 - 22	5	3.68	0.82	0 – 11.4	3/18	3.9	0.58	0 - 7	3/18, 3/22
2003	3/3 – 20	5	0.02	0.02	0 – 0.02	3/18	0.1	0.08	0 – 1	3/18
2004	3/8 - 26	5	3.37	0.72	0 – 7.2	3/17,23	2.4	0.58	0 - 7	3/17

Dewey Wills WMA (LaSalle Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>				<u>Individual Gobblers</u>			
			Mean	SE	Range	High Date	Mean	SE	Range	High Date(s)
2002	3/4-3/22	4	0	0	-	-	0	0	-	-

Ft. Polk (Vernon Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>				<u>Individual Gobblers</u>			
			Mean	SE	Range	High Date	Mean	SE	Range	High Date(s)
2002	3/4 -22	4	1.48	0.34	0 - 4.0	3/21	1.9	0.40	0 - 5	3/18
2003	3/12 -21	4	0.50	0.79	0 - 6.0	3/19	1.8	0.53	0 - 4	3/19, 3/20
2004	3/8 - 26	5	0.76	0.15	0 - 1.8	3/23	1.9	0.34	0 - 5	3/10

Jackson-Bienville WMA (Jackson and Bienville Parishes)

Year	Dates	Stops	<u>Gobbles Per Stop</u>				<u>Individual Gobblers</u>			
			Mean	SE	Range	High Date	Mean	SE	Range	High Date(s)
1999	3/15 - 28	4	5.38	1.43	0 - 13.8	3/17	4.5	0.97	0 - 8	3/17, 3/18, 3/27
2000	3/7 - 24	4	8.17	1.22	0 - 19.3	3/20	2.2	0.36	0 - 4	3/8, 3/13
2001	3/12 -30	4	6.38	1.98	0 - 27.3	3/22	4.2	1.08	0 - 14	3/23
2002	3/4 - 22	4	1.29	0.33	0 - 4	3/20	2.0	0.42	0 - 4	3/07, 3/18, 3/20, 3/21
2003	3/3 - 21	5	0.28	0.16	0 - 2.2	3/21	0.5	0.24	0 - 3	3/4
2004	3/8 - 26	5	2.53	0.78	0 - 10.6	3/17	3.2	0.79	0 - 10	3/17

Mosher Hill Hunting Club (Washington Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2000	3/6 - 24	4	5.21	1.23	0 - 13.5	3/20	3.2	0.55	0 - 7	3/22
2001	3/5 - 30	4	1.27	0.32	0 - 4.3	3/21	1.6	0.31	0 - 3	3/13, 3/18, 3/20, 3/21, 3/22
2002	3/4 - 22	4	2.82	0.96	0 - 10.25	3/20	2.1	0.53	0 - 6	3/20
2003	3/4 - 22	4	0.48	0.23	0 - 2.5	3/20, 3/21	0.9	0.41	0 - 5	3/21
2004	3/8 - 26	4	0.35	0.17	0 - 2	3/25	0.5	0.19	0 - 2	3/17, 3/25

Red River WMA (Concordia Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2003	3/3 - 21	4	1.58	0.44	0 - 5.0	3/12	1.0	0.28	0 - 3.0	3/12, 3/13
2004	3/8 - 26	4	5.17	1.55	0 - 16	3/11	2.7	0.70	0 - 8	3/17

Sherburne WMA (Pointe Coupee, St. Martin, and Iberville Parishes)

Year	Dates	Stops	<u>Gobbles Per Stop</u>				<u>Individual Gobblers</u>			
			Mean	SE	Range	High Date	Mean	SE	Range	High Date
1999	3/16 - 26	6 ^a	6.90	0.91	2.7 - 11.8	3/19	7.2	1.45	2 - 13	3/26
2000	3/6 - 23	6 ^a	5.52	1.42	0 - 15.7	3/21	7.5	1.30	0 - 15	3/23
2001	3/5 - 30	6 ^a	3.74	0.93	0 - 11.3	3/22	3.3	0.63	0 - 17	3/19
2002	3/4 - 22	7 ^a	0.57	0.35	0 - 5.0	3/7	1.0	0.52	0 - 7	3/07
2003	3/3 - 21	7 ^a	3.27	0.84	1 - 10.6	3/14	3.5	0.58	0 - 7	3/19
2004	3/8 - 26	7 ^a	7.34	1.84	0.5 - 24.4	3/17	5.1	0.80	1 - 11	3/23

^a Consists of 2 routes of 3 and 4 stops each, run simultaneously

Sicily Island WMA (Catahoula Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>				<u>Individual Gobblers</u>			
			Mean	SE	Range	High Date	Mean	SE	Range	High Date(s)
2003	3/4 - 21	4	3.98	1.33	0 - 14.0	3/12	4.4	1.18	0 - 13.0	3/12
2004	3/8 - 26	4	9.02	2.01	0.5 - 27.0	3/23	7.9	1.24	1 - 18	3/11

Three Rivers WMA (Concordia Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>				<u>Individual Gobblers</u>			
			Mean	SE	Range	High Date	Mean	SE	Range	High Date(s)
2003	3/3 - 19	4	3.12	1.12	0 - 12.5	3/13	2.3	0.68	0 - 7.0	3/19
2004	3/8 - 26	4	6.17	3.11	0 - 40.0	3/24	3.2	1.08	0 - 11	3/24

Union (Union Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2002	3/4 – 22	4	2.76	0.96	0 - 12.5	3/19	2.20	0.52	0 - 7	3/19
2003	3/3 - 21	5	2.23	0.66	0 – 10.0	3/17	2.73	0.53	0 – 8	3/17
2004	3/8 - 26	5	6.38	1.35	0 – 17.2	3/17	3.87	0.52	0 – 6	3/8, 16, 17, 18

West Bay WMA (Allen Parish)

Year	Dates	Stops	<u>Gobbles Per Stop</u>			High Date	<u>Individual Gobblers</u>			High Date(s)
			Mean	SE	Range		Mean	SE	Range	
2002	3/5 –21	4	1.37	0.62	0 –8.25	3/20	2.0	0.68	0 - 8	3/18
2004	3/8 - 26	4	0.18	0.07	0 – 0.8	3/22	0.4	0.13	0 – 1	3/12, 13, 15, 18, 22, 23